International Journal of Medical Research Professionals
P-ISSN: 2454-6356; E-ISSN: 2454-6364
DOI: 10.21276/ijmrp

IJMRP

Case Report .

Giant Thymoma with Pressure Symptoms: Case Report and Clinical Approach

Ayman F. Yousef, MD[1], Safa A. Alabdaljabbar, MD[1], Manoj P. Babu, MD[2], Mohamad Alshakaki, MD[3]

[1]Department of Thoracic Surgery, King Saud Medical City, Riyadh, KSA.
[2]Department of Anastasia, King Saud Medical City, Riyadh, KSA.
[3]Department of Radiology, King Saud Medical City, Riyadh, KSA.

ABSTRACT

Thymoma is a rare neoplasm of the anterior mediastinum; most are discovered incidentally in chest X-ray. Here we report a 62 years old man presenting with shortness of breath and cough due to ignored huge lesion extending into the right chest cavity. The tumor was completely resected through right posterolateral thoracotomy. The postoperative course was uneventful. The pathology report classified the lesion as thymoma type AB stage II.

Key words: Thymoma, Mediastinal Masses, Huge Tumour, Dyspnea, Cough, Right Sided Chest Discomfort.

***Correspondence to:**

Dr. Ayman Yousef,
Consultant Cardiothoracic surgery, P.O Box-331771.
Riyadh, Kingdom of Saudi Arabia.

Article History:

Received: 07-12-2016, **Revised:** 26-12-2016, **Accepted:** 15-01-2017

Access this article online	
Website: www.ijmrp.com	Quick Response code
DOI: 10.21276/ijmrp.2017.3.1.056	

INTRODUCTION

Thymomas are rare neoplasms, accounting for less than 1% of all adult malignancies.[1] They are most commonly found in the anterior mediastinum, although they have been reported in the neck, lung, and pericardium. About one half of patients are asymptomatic while others present with vague chest pain, dyspnea, or cough and some present with constitutional symptoms.[2]

Computed tomography (CT) is the diagnostic tool of choice to image the mediastinal lesion and its anatomical extent. Fine needle aspiration (FNA) biopsy or CT guided core needle biopsy are feasible methods to differentiate mediastinal lesions.[3] Surgery remains the baseline attempt in thymoma therapy and the only curative treatment.

CASE DESCRIPTION

57 years old Yemeni male non-smoker, presented with history of fall down on July 2009 complain of left chest pain, no shortness of breath, no history of loss of consciousness. On examination he was hemodynamically stable, his chest was tender over the left 6th-7th ribs with decrease air entry on the right side. Chest x-ray revealed no obvious injury but there was large right lung mass. CT chest showed right large middle zone soft lung mass 12x12x11 cm (Figure 1 A and B). Core biopsy was taken and the results were suspicious of lymphoma. After few days, the patient signed out as discharge against medical advice.

In February 2016, the patient came back complaining of shortness of breath, right chest discomfort and cough. No history of fever. On examination there was decrease air entry on the right side of the chest, but no palpable lymph nodes. Laboratory investigations were within normal. CT chest showed large right chest soft tissue mass consisting of multifocal hyperdensities separated by hypodense areas, lobulated, measuring 19x16x11 cm, the mass lesion has sharp smooth outline and appeared merging with medial and anterior pleural surface, causing compression collapse of right middle lobe with mild mediastinal shift to ipsilateral side (Figure 1 C).The findings of Trucut biopsy consistent of spindle cell tumor. Bronchoscopy showed signs of outside compression at the proximal part of the right main bronchus with some whitish secretions.

A right posterolateral thoracotomy done to the patient under general anesthesia and large mass found extending from anterior mediastinum which was excised completely and delivered in tow pieces, measuring 14x13x8 cm and weighing around 1,248 grams. Histopathology results were consistent with Thymoma of (AB) type and stage II (Figure 2). The patient was discharge 10 days later in excellent condition. No further therapy was given and the patient was recovering well as observed during follow-up.

DISCUSSION

Thymomas are rare neoplasms of the anterior mediastinum which represent 20-30% of mediastinal tumors in adults.[3,4] Most of nonmystenic thymomas are asymptomatic and discovered

incidentally but in some uncommon cases they present with pressure symptoms such as dyspnea, chest pain and cough especially in case of giant thymoma like the present case, and rarely they present with superior vena cava syndrome[4], red cell aplasia, hypogammaglobulinemia[3], or hemomediastinum and hemothorax.[5]

Several classification systems of thymomas have been developed and described. However, the World Health Organization histological classification and staging system acknowledging the presence of invasion and anatomic extent of involvement described by Masaoka et al. are the most used systems for classifying thymomas (table 1).[3]

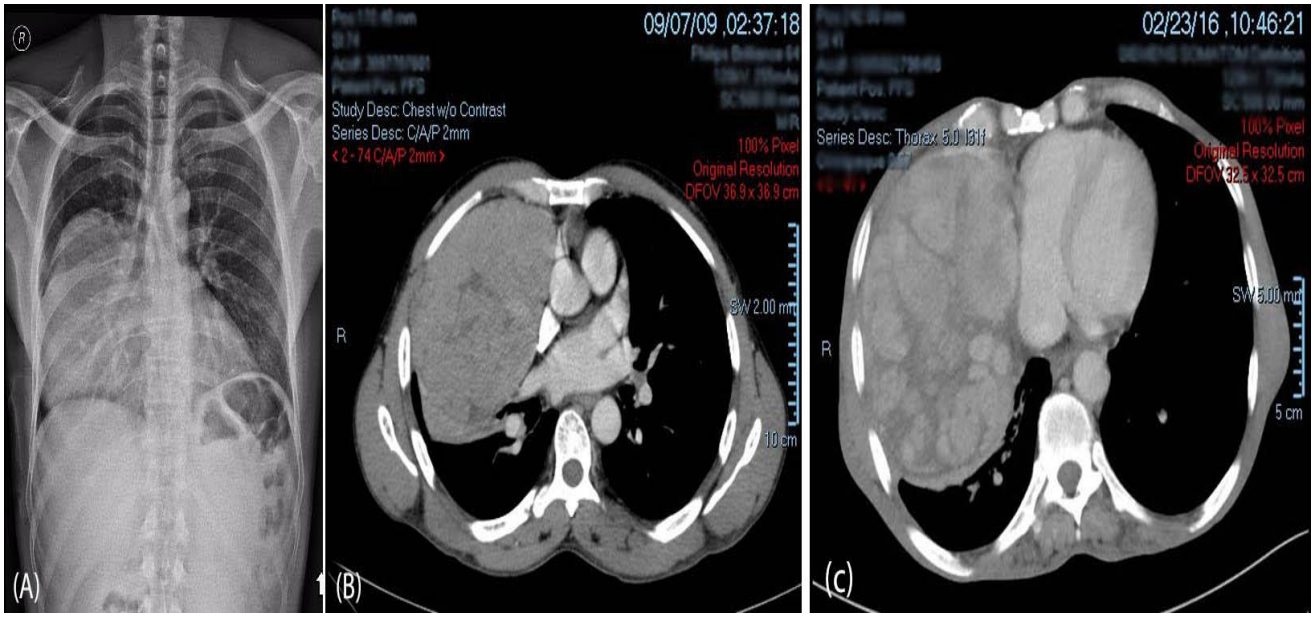

Fig 1: (A) Chest x-rayshowed right lung mass. (B) CT chest showing right lung soft tissue mass. (C) CT chest showing large right soft tissue mass, lobulated in nature.

Table 1: Thymoma Classification Systems

Classification systems		
WHO	**Based on the traditional descriptive classification and the corticomedullary classification**	
	A	Bland spindle/oval epithelial tumor cells with few or no lymphocytes. (Synonyms: spindle cell thymoma; medullary thymoma)
	AB	Mixture of a lymphocyte-poor type A thymoma component and a more lymphocyte-rich type B-like component. (Synonyms: mixed thymoma)
	B1	Histological appearance of normal thymus, composed predominantly of areas resembling cortex with epithelial cells scattered in a predominant population of immature lymphocytes, and areas of medullary differentiation. (Synonyms: lymphocyte-rich thymoma; predominantly cortical thymoma)
	B2	Large, polygonal tumor cells that are arranged in a loose network and exhibit large vesicular nuclei with prominent large nucleoli – background population of immature T-cells always present. (Synonyms: cortical thymoma)
	B3	Predominantly medium-sized round or polygonal cells with slight atypia. Epithelial cells are mixed with minor component of intraepithelial lymphocytes. (Synonyms: well-differentiated thymic carcinoma; epithelial thymoma; squamoid thymoma)
	C	Heterogeneous group of thymic carcinomas
Masaoka	**Presence of invasion and anatomic extent of involvement (clinically and histopathologically)**	
	I	Macroscopically completely encapsulated and microscopically no capsular invasion
	II	Microscopic invasion into capsule (IIa) or macroscopic invasion into surrounding fatty tissue or mediastinal pleura (IIb)
	III	Macroscopic invasion into neighboring organs (ie, pericardium, great vessels, or lung)
	IVa	Pleural or pericardial dissemination
	IVb	Lymphogenous or hematogenous metastasis

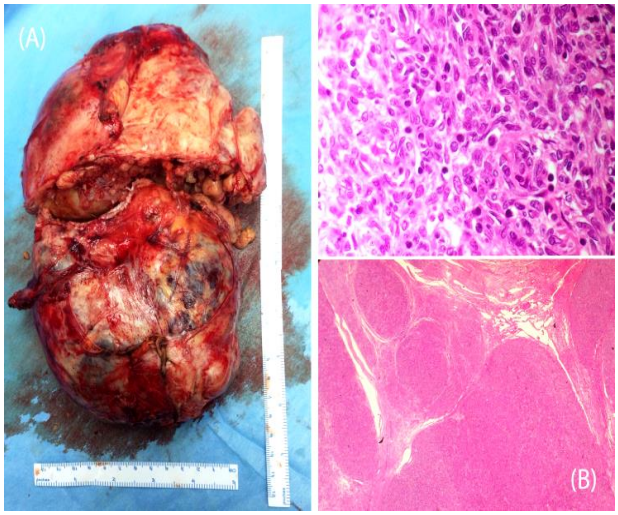

Fig 2: (A) A well-encapsulated mass arising from the anterior mediastinum into the right thoracic cavity. Dense inflammatory reaction with adhesions to the pericardium. (B) Microscopic examination: predominantly epithelial component with occasional foci of lymphoid component mixed with epithelial cells with microscopic capsular invasion. AB type Thymoma.

Computed tomography (CT) is the examination of choice for suspected mediastinal tumors in order to characterize the mass in regard to its anatomic dissemination and invasion of neighboring structures, as well as possible distant metastases[2,3], CT-guided biopsy as suggested by Filosso et al. is superior to fine needle aspiration but it failed to obtain a conclusive diagnosis[6] as was the case here. The definitive diagnosis can be achieved by postoperative pathological examination.[2]

Surgical resection of the tumor is the choice of treatment for thymoma. Although median sternotomy is the standard approach for thymomas, only few cases of giant thymomas were resected via median sternotomy,[4] it is more suitable for normal size tumors. Three cases of giant thymomas were resected through anterolateral thoracotomy[7-9] and one was reported through hemiclamshell approach.[4] In this case, the approach was through posterolateral thoracotomy. Postoperative radiotherapy as adjuvant is used for partially resected or invasive thymomas. However the use of adjuvant radiotherapy in complete resected Masaoka stage II tumors remains controversial.[3] In the case described above, no further adjuvant therapy was planned. On the other hand, chemotherapy is adopted in selected patients with inoperable or gross residual disease after local treatment.[3]

REFERENCES

1. Guimarães M, Benveniste M, Bitencourt A, et al. Thymoma Originating in a Giant Thymolipoma: A Rare Intrathoracic Lesion. Ann Thorac Surg 2013; 96:1083–5.
2. Wright C, Mathisen D. Mediastinal tumors: diagnosis and treatment. World J. Surg. 2001; 25: 204–209.
3. Tomaszek S, Wigle D, Keshavjee S, Fischer S. Thymomas: Review of Current Clinical Practice Review. Ann Thorac Surg 2009; 87:1973-80.
4. Zhao W, Fang W. Giant thymoma successfully resected via hemiclam-shellthoracotomy: a case report. J Thorac Dis 2016; 8(8):677:680.
5. Santoprete S, Ragusa M, Urbani M, Puma F. Shock induced by spontaneous rupture of a giant thymoma. Ann Thorac Surg 2007; 83:1526–8.
6. Filosso PL, Delsedime L, Cristofori RC, Sandri A. Ectopicpleural thymoma mimicking a giant solitary fibroustumour of the pleura. Interact Cardiovasc Thorac Surg2012;15:930-2.
7. Saito T, Makino T, Hata Y, Koezuka S, Otsuka H, Isobe K, et al. Giant thymoma successfully resected via anterolateral thoracotomy: a case report. Journal of Cardiothoracic Surgery 2015; 10:110.
8. Limmer S, Merz H, Kujath P. Giant thymoma in the anterior-inferiormediastinum. Interact Cardiovasc Thorac Surg. 2010; 10:451–3.
9. Yamazaki K, Yoshino I, Oba T, Yohena T, Kameyama T, Tagawa T, et al. Ectopic pleural thymoma presenting as a giant mass in the thoracic cavity. Ann Thorac Surg. 2007; 83:315–7.

Source of Support: Nil. **Conflict of Interest:** None Declared.

Cite this article as: Ayman F. Yousef, Safa A. Alabdaljabbar, Manoj P. Babu, Mohamad Alshakaki. Giant Thymoma with Pressure Symptoms: Case Report and Clinical Approach. Int J Med Res Prof. 2017; 3(1):277-79.
DOI:10.21276/ijmrp.2017.3.1.056